

REMARKS

In response to the non-final Office Action issued on April 26, 2007, the Applicant respectfully submits a set of amended claims and amended specification to replace those on file as well as the following remarks.

Claims 1-10 are pending. Applicant has amended claims 1-10 and added claims 11-25. Applicant has also amended the specification to address the objections to the specification. Applicant does not believe that any new matter has been introduced by the amendment.

First, Applicant has amended for clarification purposes the entire application document to change “single broadcast” to “unicast”, “single broadcast routing forwarding list” to “unicast routing forwarding table”, “multicast routing forwarding list” to “multicast routing forwarding table”, “entry interface” to “ingress interface”, and “exit interface” to “egress interface”. These changes do not introduce any new matter, but merely substitute in terms that are accurate translations of the original PCT application, which is in Chinese, and more consistent with the common terms for the respective technical concepts they are intended to describe.

Informalities and Claim Rejections under 35 U.S.C. § 112

In section 2, claims 1-10 are rejected under 35 U.S.C. 112, first paragraph, as being indefinite.

The Applicant has amended claims 1-10 for clarification purposes. No new matter in this regard has been introduced.

Especially, referring to amended claim 1, it is clear that certain information carried in the multicast message must be compared with corresponding information in the multicast message forwarding rule; “configuring” has been amended to “establishing” for better understanding of the technical solution; “regulating” has been amended to “specifying” for better understanding of the technical solution; and “the network device” has been amended to “a network device” at its first occurrence.

Referring to amended claim 3, “if yes” has been amended to “if the message entering through the interface is a multicast message”, and “if no” has been amended to “if the message entering through the interface is not a multicast message”.

Referring to amended claim 6, “matching” has been amended to “comparing”.

Referring to amended claim 7, “determining whether the multicast message forwarding rule is configured at the interface of the network device” has been amended to “determining whether there is a multicast message forwarding rule established at the interface of the network device”; “if yes” has been amended to “if there is a multicast message forwarding rule established at the interface of the network device”, and “if no” has been amended to “if no multicast message forwarding rule is established at the interface of the network device”; and “the multicast routing forwarding list” has been amended to “a multicast routing forwarding table”.

Referring to amended claim 8, “if yes” has been amended to “if there is a multicast message forwarding rule matching the information carried by the multicast message in the forwarding match condition”, and “if no” has been amended to “if no multicast message forwarding rule in the forwarding match condition matches the information carried by the

multicast message”; the multiple dependency has been removed such that the technical solutions claimed in original claims 8-10 are now claimed in amended claims 8-10 and new claims 11-25 respectively; and “the multicast routing forwarding list” has been amended to “a multicast routing forwarding table”.

Claims 9 and 10 are amended for better understanding of the technical solutions claimed therein in combination with the rest of the amended application document.

In section 3, the disclosure of the specification is objected to under 37 CFR 1.71 as being incomprehensible.

In addition to the amendments mentioned at the opening section above, Applicant has further amended the specification to clarify the disclosure so that the Examiner may make a proper comparison of the invention with the prior art. No new matter has been introduced into the disclosure.

In section 5, claims 1- 10 are rejected under 35 U.S.C. 112, second paragraph, as failing to comply with the enablement requirement.

Referring to claims 1 and 7, as mentioned above, “configure” pointed out by the Examiner has been amended to “establish”. It is respectfully submitted that how to determine whether a certain condition or rule has been established at the ingress interface (the entry interface in the original document) is common knowledge to those skilled in the art, which can thus make and/or use the invention easily without relying upon the description thereof in the specification.

Referring to claims 9 and 10, as mentioned above, they have been amended to be clear enough. It is respectfully submitted that how to determine whether the interface is a

next hop address or an egress interface and how to determine the address is a point to multipoint, point to point, or unicast address are both common knowledge to those skilled in the art, which can thus make and/or use the invention easily without relying upon the description thereof in the specification.

In section 6, claim 10 is objected to because of informalities therein.

The applicant has spelled out the abbreviations “NBMA” and “PTP” as “Non-Broadcast Multiple Access” and “Point To Point”, respectively, at their first occurrences.

Claim Rejections under 35 U.S.C. §§ 102 and 103

In sections 9, 11, 13 and 14, claims 1-2 are rejected under 35 U.S.C. 102 as being unpatentable over Miller (US Patent No. 6,873,627), claims 3 and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller in view of Kalkunte (US Patent No. 6,567,417), claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miller in view of Kalkunte further in view of Fox (US Patent No. 7,039,052), and claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miller in view of Kalkunte further in view of Hill (US Patent No. 6,870,840).

As can be seen, in addition to the amendments mentioned above, claim 1 is further amended to recite a feature “the multicast message forwarding rule having a message forwarding destination specified therein”. Support for such an amendment can be found in, for example, step C21 of original claim 9.

The multicast message forwarding rule in amended claim 1 thus distinguishes itself from the forwarding rule disclosed by Miller. Specifically, as described in the first

paragraph of the section “Detailed Description of the Embodiment” in the original specification, the forwarding rule in the present invention specifies the mode of forwarding multicast message, i.e. forwarding the multicast message according to the message forwarding destination (forwarding egress interface or next hop address, which is further defined in claim 9); while the forwarding rule disclosed by Miller is only involved in format conversion rather than the mode of forwarding, i.e. is used to determine whether any of the destination addresses included in the packet corresponds to one of the receivers that has a receiver format that must be converted (see the abstract). In other words, the forwarding rule disclosed by Miller is completely silent in specifying the message forwarding destination.

In addition, Kalkunte disclosed a method of forwarding data in a network switch fabric, in which an egress port bitmap is determined based on the type of the packet (see Col. 4, lines 61-63), and the packet is forwarded based on the egress port bitmap (see the abstract). However, in the solution of the present invention, the forwarding rule can be designated by the users as required so as to specify the mode of forwarding multicast message (also see the first paragraph of the section “Detailed Description of the Embodiment” in the original specification). That is to say, the solution of amended claim 1 is completely different from that disclosed by Kalkunte.

Furthermore, due to the significant difference mentioned above between the solution of amended claim 1 and that disclosed by Miller, as well as between the solution of amended claim 1 and that disclosed by Kalkunte, those skilled in the art can not reach the solution of amended claim 1 even if Miller and Kalkunte are taken in combination.

Therefore, amended claim 1 is patentable over Miller and Kalkuntel.

Moreover, Fox and Hill neither disclosed nor suggested the solution of amended claim 1. Therefore, amended claim 1 is patentable over Miller and Kalkuntel even in combination with Fox and/or Hill.

Amended dependent claims 2-10 and new dependent claims 11-25 are also patentable over Miller and Kalkunte, even in combination with Fox and/or Hill, relying at least upon their dependencies from amended claim 1.

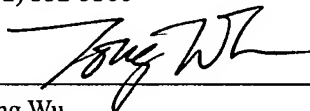
Applicant therefore respectfully request the withdrawal of the claim rejections based on the cited references.

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Respectfully submitted,

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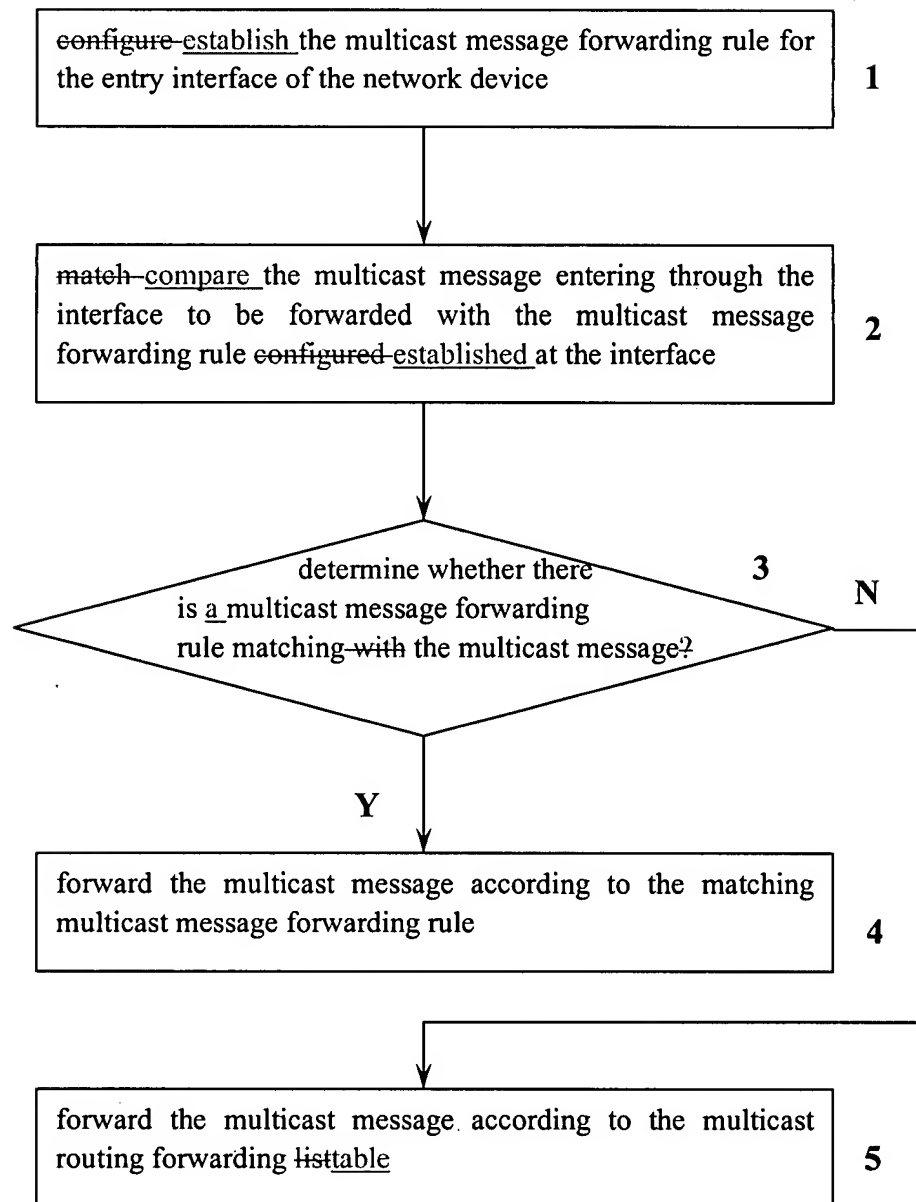


Fig.2